

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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DANEMARK

RECEIVED

30 JUN 2005

H IBERG

PCT

WRITTEN OPINION OF THE
INTERNATIONAL PRELIMINARY
EXAMINING AUTHORITY

(PCT Rule 66)

Date of mailing
(day/month/year)

29.06.2005

Applicant's or agent's file reference
P738PC00

REPLY DUE

within 1 month(s)
from the above date of mailing

International application No.
PCT/EP2004/050355

International filing date (day/month/year)
24.03.2004

Priority date (day/month/year)
25.03.2003

International Patent Classification (IPC) or both national classification and IPC
A23K1/14, A23K1/18

Applicant

DANMARKS JORDBURGSFORSKNING et al

1. ☒ The written opinion established by the International Searching Authority:
☒ is ☐ is not
considered to be a written opinion of the International Preliminary Examining Authority
2. This second report contains indications relating to the following items:
☒ Box No. I Basis of the opinion
☐ Box No. II Priority
☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐ Box No. IV Lack of unity of invention
☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐ Box No. VI Certain documents cited
☐ Box No. VII Certain defects in the international application
☐ Box No. VIII Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4b/s. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 25.07.2005

Name and mailing address of the international preliminary examining authority:



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**WRITTEN OPINION OF THE INTERNATIONAL
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International application No.
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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this opinion is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed")*:

Description, Pages

1-102 as originally filed

Claims, Numbers

1-51 received on 02.06.2005 with letter of 02.06.2005

Drawings, Sheets

1-10 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☒ the claims, Nos. 52-88
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

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**Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or
industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	2,4-8,12-42,45-47
	No: Claims	1,3, 9-11, 43, 44, 48-51
Inventive step (IS)	Yes: Claims	
	No: Claims	1-51
Industrial applicability (IA)	Yes: Claims	1-51
	No: Claims	

2. Citations and explanations:

see separate sheet

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(SEPARATE SHEET)**

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial
applicability; citations and explanations supporting such statement**

1. Reference is made to the following documents:

- D1: "Project applications for the research programme FOJO II (2000-2005) : Product quality of organic beef and pork in relation to grazing system and feeding with bio-active crops (PROSQUAL)"[Online] 2000, - 2000 XP002291897 Retrieved from the Internet: URL:<http://www.okoforsk.dk/projekt/ii12/ans.pdf> [retrieved on 2004-08-10]
- D2: RIDEOUT T C ET AL: "Fecal excretion of major odor-causing and acidifying compounds in response to dietary supplementation of chicory inulin extract in pigs" JOURNAL OF DAIRY SCIENCE, AMERICAN DAIRY SCIENCE ASSOCIATION. CHAMPAIGN, ILLINOIS, US, vol. 85, no. Supplement 1, 2002, pages 14-15, XP002263875 ISSN: 0022-0302
- D3: HOSKIN S O ET AL: "EFFECT OF WITHHOLDING ANTHELMINTIC TREATMENT ON AUTUMN GROWTH AND INTERNAL PARASITISM OF WEANER DEER GRAZING PERENNIAL RYEGRASS-BASED PASTURE OR CHICORY" PROCEEDINGS OF THE NEW ZEALAND SOCIETY OF ANIMAL PRODUCTION, WELLINGTON, NZ, vol. 63, 2003, pages 269-273, XP008025489 ISSN: 0370-2731
- D4: CHOI S H ET AL: "EFFECTS OF CHICORY FEEDING ON THE GROWTH AND CARCASS QUALITY OF KOREAN NATIVE GOATS" HANGUK CHUKSAN HAKHOE CHI - KOREAN JOURNAL OF ANIMAL SCIENCE, KOREAN SOCIETY OF ANIMAL SCIENCE, SUWON, KO, vol. 40, no. 3, 1998, pages 255-260, XP008025504 ISSN: 0367-5807
- D5: HOPKINS D L ET AL: "CARCASS AND MEAT QUALITY OF SECOND-CROSS CRYPTORCHID LAMBS GRAZED ON CHICORY (CICHORIUM INTYBUS) OR LUCERNE (MEDICAGO SATIVA)" AUSTRALIAN JOURNAL OF EXPERIMENTAL AGRICULTURE, CSIRO, COLLINGWOOD, AU, vol. 35, no. 6, 1995, pages 693-697, XP008025511 ISSN: 0816-1089
- D6: KNARREBORG A ET AL: "Effect of non-starch polysaccharides on production of indolic compounds in entire male pigs" ANIMAL SCIENCE, DURRANT, GB,

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vol. 74, no. 3, 2002, pages 445-453, XP008025386 ISSN: 1357-7298

D7: WO 99/22604 A (MARS UK LTD ; FONE JANEL (GB)) 14 May 1999 (1999-05-14)

2. With respect to the Rule 67-1 (iv) objection raised in the earlier communication, it appears that the amended wording is acceptable.

3. With respect to the issue of definition and clarity with respect to the term processed, it is accepted that the use of the term 'processed' certainly precludes further reference to those documents in which animals were allowed to graze on chicory, as it is clear that in these references there was no treatment of the chicory whatsoever. The fodder was in a fresh state when eaten by the animal.

However, it is considered to be acceptable to say that "a processed product is a product which is subjected to a (special) physical or chemical process or treatment", as mentioned in your letter.

Therefore, any chicory which has been harvested can be said to have undergone (at least) a physical treatment. Furthermore, as previously mentioned, the chicory will immediately begin to both dry and ferment. The present wording of the claim therefore makes it difficult to differentiate between the claimed products and any product as described in the prior art. In addition, the chicory roots appear in the description to be just as useful as dried chicory with respect to their beneficial effects.

4. Chicory is known to contain inulin and other sugars or 'secondary metabolites'. Indeed, inulin extracted from chicory is known to comprise other components, albeit occasionally considered to be contaminants. It is therefore clear for those skilled in the art that chicory/chicory product contains inulin (known as a source for decades) in addition to sugars and/or secondary metabolites.

5. Claims 44 and 51 relate to products which are defined in terms of a process of manufacture. Such claims are only admissible if the products as such are, inter alia, new and inventive. A product is not rendered new merely by the fact that it is produced by means of a new process (see PCT Search and Examination Guidelines, Ch. 5.26). In the case of product claims 44 and 51, it appears impossible to discern any difference between

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those products produced by the applicants process and those produced by similar processes described in the prior art. In this case the product appears to be any chicory product containing roots.

6. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 43, 44 and 49-51 is not new in the sense of Article 33(2) PCT.

The document D1 clearly teaches that animals may be fed with chicory products as described in the amended claim 1, in order to reduce problems such as drip loss and boar taint (see D1: page 16, paragraph 2). The chicory root product and method for production are implicitly disclosed in the document D1 and its use as a feed for pigs and in the production of pig feed. While the use thereof is not specified to begin at least one day prior to slaughter, it might be considered implicit since the feed requires that amount of time at least for metabolism. The document D1 therefore removes novelty from the subject-matter of claims 1, 43, 44 and 49-51.

The document D2 discloses the use of a chicory to manufacture a chicory inulin extract containing feed for pigs (over 30kg) which is used for its beneficial effects on malodours associated with skatole (see D2; abstract). The document D2 therefore removes novelty from the subject-matter of claim 1.

The document D4 discloses the use of dietary chicory (implicitly a harvested type, since it is mixed with other components) in animals for improving flavour of goat meat (see D4; abstract). The document D4 therefore removes novelty from the subject-matter of claim 1.

The document D7 discloses a product processed in a manner similar to the present invention which comprises chicory root and inulin, the product being suitable for use in the methods of the present invention (see D7: page 3-4).

7. Should novelty be restored to the subject-matter of any of the independent claims, the above mentioned documents D1-D7 should also be considered when addressing the question of inventive step.

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8. Dependent claims 3, 9-11 and 48 are disclosed in their present form in D1 (see D1: page 16, paragraph 2) and are therefore not novel.

Dependent claims 2, 4-8, 12-42, and 45-47 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, since these claims refer to feeding protocols, target animals and results to be achieved which would be clear choices for those skilled in the art (see documents D1-D5 and the corresponding passages cited in the search report).